CLAIMS

1. A biaxially oriented polyester film for magnetic recording media, which has (1) a dimensional change in a direction perpendicular to a load application direction on the film plane of 0.40 % or less when the film is treated at 49° C and 90 %RH under a load of 2.7 kg per 1 mm^2 of unit sectional area in a thickness direction of the film for 72 hours, (2) a crystallinity of 27 to 45 %, (3) a temperature expansion coefficient αt in a direction perpendicular to the above load application direction on the film plane of -5×10^{-6} to $+20 \times 10^{-6}$/° C and a humidity expansion coefficient αh in a direction perpendicular to the above load application direction on the film plane of $+5 \times 10^{-6}$ to $+20 \times 10^{-6}$/%RH, the value of $(\alpha t + 2\alpha h)$ being $+45 \times 10^{-6}$ or less, (4) a heat shrinkage factor in a direction perpendicular to the above load application direction on the film plane of 0 to 0.7 %, and (5) a thickness of 3 to 7 μm.

2. The film of claim 1 which has an endothermal peak of 0.05 mJ/mg or more at a temperature range of 120 to 160° C when measured by a differential scanning calorimeter (DSC).

3. The film of claim 1 which has a single-layer structure and at least one exposed surface of which has a center plane average roughness WRa of 1 to 10 nm and a 10-point average roughness WRz of 30 to 250 nm.

4. The film of claim 1 which has a laminate structure consisting of at least two layers and one exposed surface of which has a WRa of 1 to 10 nm and a WRz of 30 to 250 nm and the other exposed surface of which has a WRa of 5 to 20 nm and a WRz of 100 to 300 nm.

5. The film of claim 1 which has a Young's modulus in the above load application direction of at least 6 GPa and a Young's modulus in a direction perpendicular to the above load application direction of at least 4 GPa and a total of the Young's moduli in the two crossing directions of 10 to 20 GPa.

6. The film of claim 5, wherein the Young's modulus in the above load application direction is larger than the Young's modulus in a direction perpendicular to the above load application direction.

7. The film of claim 1 which is made from polyethylene-2,6-naphthalene dicarboxylate.

8. A magnetic recording medium comprising the biaxially oriented polyester film of claim 1 and a magnetic layer formed on one side of the film.

9. The magnetic recording medium of claim 8, wherein the biaxially oriented polyester film has a single-layer structure, at least one exposed surface of the film has a center plane average roughness WRa of 1 to 10 nm and a 10-point average roughness WRz of 30 to 250 nm, and the above magnetic layer is existent on the exposed surface.

10. The magnetic recording medium of claim 8, wherein the biaxially oriented polyester film has a laminate structure consisting of at least two layers, one exposed surface of the film has a WRa of 1 to 10 nm and a WRz of 30 to 250 nm, the other exposed surface of the film has a WRa of 5 to 20 nm and a WRz of 100 to 300 nm, and the above magnetic layer is existent on the exposed surface having a WRa of 1 to 10 nm and a WRz of 30 to 250 nm.

11. The magnetic recording medium of claim 8 which is a magnetic recording media for digital recording.